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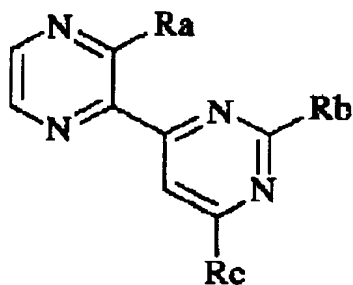
APPLICATION DATE : 21-09-93
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APPLICANT : NISSAN CHEM IND LTD;

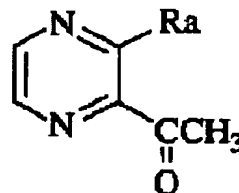
INVENTOR : ITO YOICHI;

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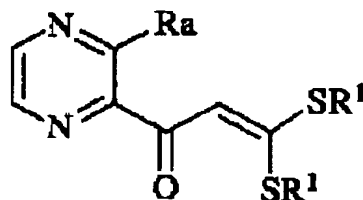
TITLE : PYRAZINE DERIVATIVE AND
HERBICIDE



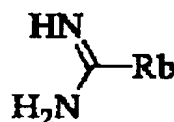
I



II



III



IV

ABSTRACT : PURPOSE: To obtain a new compound exhibiting excellent herbicidal effect at a low rate of application and useful as a herbicide for plowed land, paddy field and non-plowed land.

CONSTITUTION: The compound of formula I [Ra is H, halogen, alkoxy, alkylamino, alkyl or haloalkyl; Rb is phenyl, benzyl, pyridyl, thienyl or furyl; Rc is SR¹, OR² or N(R³)R⁴ (R¹ to R⁴

are H, alkyl, alkenyl or alkynyl; R³ and R⁴ may together with N

form a ring)], e.g. 2-[2-(4-chlorophenyl)-6-methylthio-4-pyrimidinyl]-3-ethylpyrazine. The compound of formula I can be produced by reacting a 2-acyl-3-alkylpyrazine of formula II with carbon disulfide and an alkyl halide in the presence of a base and reacting the resultant ketene dithioacetal derivative of formula III with a phenylamidine derivative of formula IV in the presence of a base. This compound is effective for the control of broad-leaved weeds such as Byzantine-speedwell and white-bird's-eye, gramineous weeds, cyperaceous weeds and paddy field weeds such as bulrush and barnyard grass.

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